

Enjoying the View: GeoEye Inc., Satellite and Aerial Imagery Provider

As the global population grows to be ever more conscious of how international standards of living and environmental ignorance affects the planet earth, geospatial imagery corporations such as GeoEye Inc. remain committed to researching and providing satellite and aerial imagery for the purpose of observation, scientific exploration, support to academic institutions and so much more.

The art and science behind satellite and aerial imagery is rapidly becoming an immense topic of interest among scientific researchers, corporate and consumer suppliers and the general public from around the globe. As the curiosity and awareness of satellite imaging amplifies, so too must the scientific research and modern resources required to provide outstanding and reliable observation satellites and aerial imagery technology.

As one of the world's leading commercial and space imaging satellite providers, the GeoEye Inc. headquarters are located in Dulles, Virginia. An award-winning geospatial products and solutions provider, GeoEye prides itself in providing satellite and aerial imagery, geospatial information, geospatial products and clear descriptions and clarification for the purpose of providing scientists and the general public with a better understanding of the world as we know it.

GeoEye's primary competitors include DigitalGlobe; headquartered in Longmont, Colorado with locations in Washington, D.C., Boston, MA, Phoenix, AZ, Walnut Creek, CA, John C. Stennis Space Center, MS, London, U.K. and Singapore; and Spot Image, headquartered in Toulouse, France.

By maintaining a Quality Management System (QMS) and official ISO recognition, GeoEye is recognized worldwide for operating outstanding and reliable geospatial imaging.

Before renaming itself GeoEye in 2006, the corporation was first incorporated in Delaware in 1992 under the Orbital Imaging Corporation, or ORBIMAGE, as a wholly owned subsidiary of Orbital Sciences. In 1996 and 1997, Orbital Imaging Corporation purchased all assets and liabilities of Orbital Sciences' operating division, including engineering, construction and launch services for each of Orbital Sciences' satellites. Although Orbital Imaging Corporation owned over 60 per cent of the stock, the corporation separated from the Orbital Imaging Corporation and officially changed its name from Orbital Sciences to GeoEye Inc. in 2006 without any consequence. Since November 2001, GeoEye's Chairman of the Board has been and remains to be former astronaut James A. Abrahamson.

The satellite imagery services provided by GeoEye are expanding rapidly as consumer demand rapidly and steadily increases. With the valued and increased interest in on-line mapping search engines such as Google Earth [TM] and Microsoft Virtual Earth [TM], the satellite map images provided by GeoEye has expanded to 253 million square kilometers in recent years. GeoEye now proudly provides satellite map images to major internet search engines Microsoft, Yahoo and Google with its most recently launched and most remarkable earth observation satellite, the GeoEye-1.

Not only does GeoEye provide commercial satellite imagery to consumers interested in online mapping searches, but the corporation also provides imagery for GPS systems and personal navigation devices. With the ever expanding consumer demand for geospatial technologies, GeoEye is continually involved in developing new applications incorporating imagery and imagery information products for personal communication tools.

As satellite imagery research and production continues to develop, GeoEye looks forward to capturing several significant and historical global events. Digital mapping databases most definitely will be a growing demand by governments in the United States and overseas as political uncertainty, the unfortunate threat of global terrorist activity and large natural disasters increase. GeoEye's imaging technology is also found to be well suited for infrastructure project management, using aerial and satellite imagery to help the U.S. accomplish infrastructure goals, saving on time and resources by providing intelligible physical and environmental reference.

In addition to capturing significant events and providing outstanding information for scientific research, GeoEye technology will be tested to monitor climate change and carbon reduction as worldwide awareness and concern for the earth's fragile environment and uncertain future continues to grow.

The exceptional imagery GeoEye provides is through the use of its collection of satellite and aerial systems. All satellite research conducted by GeoEye is located in Dulles, Virginia and Thornton, Colorado. Additional image processing is conducted in Saint Louis, Missouri and Norman, Oklahoma with numerous ground stations located worldwide.

Exceptionally captured images are produced and provided by GeoEye through the use of the three low-Earth orbit imaging satellites it operates. In addition to its most advanced commercially available satellite, the GeoEye-1, the three operating imaging satellites are as follows:

GeoEye-1

GeoEye-1 was successfully launched on September 6, 2008 from Vandenberg Air Force in California and is used to serve a wide variety of industries including: Defense, National and Homeland Security, Air and Marine Transportation, Oil and Gas, Energy, Mining, Mapping and Location-based Services, State and Local Government, Insurance and Risk Management, Agriculture, Natural Resources and Environmental Monitoring.

The GeoEye 1 operates out of Dulles Virginia and is currently the world's highest resolution satellite. The GeoEye-1 simultaneously provides 16 inches of panchromatic imagery; a black and white image sensitive to all or most of the visible spectrum, and 1.65 meters of multispectral imagery; an image capturing light that is invisible to the human eye such as infrared.

The GeoEye-1 has already captured international attention and many significant global events. In August, 2008 Google officially signed on the GeoEye-1 to provide satellite imagery for Google Earth and Google Maps. On January, 20, 2009 GeoEye-1 captured the famous inauguration of U.S. President Barack Obama. GeoEye-1 was the only device used to provide a snapshot of the occasion from space.

In February 2009, the National Geospatial Intelligence Agency (NGA) announced to GeoEye that the imagery provided by GeoEye-1 satellite was certified for quality and resolution. Because GeoEye has met the NGA requirements, the GeoEye-1 satellite can now deliver images to the agency, bringing in monthly revenue of \$12.5 million.

IKONOS

Launched on September 24, 1999 by Space Imaging, the IKONOS was the first high resolution satellite in the world. The satellite set the standard for sub-half meter resolution imagery and products. The IKONOS is mainly used for such markets as national security, military mapping, air and marine transportation, and by regional and local governments.

Operating out of Thornton, Colorado the IKONOS acquired its name from the Greek term eikon, meaning image. Every 98 minutes, the IKONOS orbits the earth and provides 32 inches panchromatic and 3.2 m of multispectral data at a rate of over 770 sq mi per minute, making it possible to distinguish and record objects on the earth as small as 16 inches long.

In March 2009, the IKONOS satellite was signed on to provide the backdrop for UbiSoft's new game Tom Clancy's H.A.W.X., a modern jet combat game which takes place above real-world locations. H.A.W.X. will be accessible to several big-name game consoles.

ORBVVIEW-2

Launched in 1997 by the Orbital Imaging Corporation, the Orbview-2 was the first satellite to collect color imagery of the earth's entire land and ocean surfaces on a daily basis. As the satellite has the ability to capture up to 2,800 kilometres, it provides an immense coverage of products which are routinely used in naval operations, environmental monitoring and global crop assessment applications.

Managed out of Dulles, Virginia, The Orbview -2 is also known as the SeaStar, most likely due to the fact that commercial fishing vessels employ the satellite for detecting oceanographic conditions used to create fishing maps. The Orbview-2 is also used to assist with carbon testing and environmental research.

In addition to the Orbview -2, GeoEye previously operated the Orbview -3. Every day, the satellite collected up to 81,000 sq miles of imagery. It revisited each location on Earth in less than three days with the ability to collect data up to 50 degrees off of the lowest point. On April 23, 2007, GeoEye, made the announcement that the Orbview-3 satellite was permanently out of service, due to technical difficulties. While GeoEye continues to maintain the satellite, the corporation no longer uses its imagery.

In addition to the three satellites mentioned, GeoEye will be launching a fourth satellite in the near future. In 2011 or 2012, the GeoEye-2 will be launched. The satellite has a contract with the ITT Corporation and has a planned resolution of 9.8 inches.

In addition to satellite imagery, GeoEye provides aerial imagery. Aerial imagery is produced using one airplane with a digital and light detection radar (LiDAR) camera which adapts to varying topography, land cover and project size and coverage; as well as two airplanes equipped with a digital mapping camera. One of the two airplanes will be used in photogrammetric missions – remote sensing technology designed to produce high level 3D imagery. GeoEye produces aerial imagery through a central U.S. ground system that controls the satellites and receives processes and archives their imagery. The system also includes electronic cataloging and distribution capabilities.

The GeoEye aerial imagery was purchased through MJ Harden based in Mission Kansas. MJ Harden is a company purchased by GE Power Systems in 2003. The company was founded by Milton J. Harden in 1956 to provide Photogrammetric services.

GeoEye Inc. is certainly at the pinnacle of the Geospatial technology industry. As a leading provider of satellite and aerial imagery, GeoEye continues to grow and gain recognition worldwide.